

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 03/26/2007

Reviewed on 01/23/2007

1 Identification of substance:

Product details:

Product name: Aluminum nitrate

Stock number: 36291

Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company
 Johnson Matthey Catalog Company, Inc.
 30 Bond Street
 Ward Hill, MA 01835-8099
 Emergency Phone: (978) 521-6300
 CHEMTREC: (800) 424-9300
 Web Site: www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency information:

During normal hours the Health, Safety and Environmental Department.
 After normal hours call Chemtrec at (800) 424-9300.

2 Composition/Data on components:

Chemical characterization:

Description: (CAS#)

Aluminum nitrate, nonahydrate (CAS# 7784-27-2), 100%

Identification number(s):

EINECS Number: 236-751-8

3 Hazards identification

Hazard description:



Xn Harmful
 O Oxidizing

Information pertaining to particular dangers for man and environment

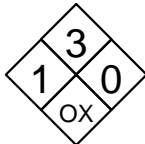
R 8 Contact with combustible material may cause fire.

R 36/38 Irritating to eyes and skin.

R 63 Possible risk of harm to the unborn child

Classification system

NFPA Ratings (scale 0-4)



Health = 1
 Fire = 3
 Reactivity = 0

The substance possesses oxidizing properties.

4 First aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.

Seek immediate medical advice.

(Contd. on page 2)

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 03/26/2007

Reviewed on 01/23/2007

Product name: Aluminum nitrate

(Contd. of page 1)

After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing Seek immediate medical advice.

Information for doctor

The following symptoms may occur:

Gastric or intestinal disorders.

Cramp

Dizziness

5 Fire fighting measures**Suitable extinguishing agents**

Product is not flammable. Use fire fighting measures that suit the surrounding fire.

Special hazards caused by the material, its products of combustion or resulting gases:

This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

In case of fire, the following can be released:

Nitrogen oxides (NOx)

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures**Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Measures for environmental protection:

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Dispose contaminated material as waste according to item 13.

Additional information:

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage**Handling****Information for safe handling:**

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Information about protection against explosions and fires:

Substance/product can reduce the ignition temperature of flammable substances.

This substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Storage**Requirements to be met by storerooms and receptacles:**

No special requirements.

(Contd. on page 3)

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 03/26/2007

Reviewed on 01/23/2007

Product name: Aluminum nitrate

(Contd. of page 2)

Information about storage in one common storage facility:

Store away from flammable substances.

Store away from reducing agents.

Do not store together with acids.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

8 Exposure controls and personal protection**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with limit values that require monitoring at the workplace:

Aluminum, soluble salts (as Al)

mg/m³

ACGIH TLV	5 (welding fumes); 5 (pyro powders) 10 (metal dust)
Austria MAK	6 (dust)
Belgium TWA	10; 2 (salts), 5 (fumes), 5 (resp. dust)
Denmark TWA	10 (dust or fume)
Finland TWA	2 (salts)
France VME	10; 5 (fumes), 5 (resp. dust)
Germany MAK	6
Hungary TWA	2; 5-STEL, 4-STEL (salts)
Korea TLV	5 (welding fumes); 5 (pyro powders) 10 (metal dust)
Norway TWA	5
Russia	2-STEL
Sweden NGV	4 (resp. dust); 10 (total dust)
Switzerland MAK-W	6
United Kingdom TWA	4 (resp. dust)
USA PEL	15 (total dust); 5 (resp. fraction)

Additional information: No data**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes.

Breathing equipment:

Use suitable respirator when high concentrations are present.

Protection of hands: Impervious gloves**Eye protection:**

Safety glasses

Tightly sealed goggles

Body protection: Protective work clothing.

- USA -

(Contd. on page 4)

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 03/26/2007

Reviewed on 01/23/2007

Product name: Aluminum nitrate

(Contd. of page 3)

9 Physical and chemical properties:

General Information	
Form:	Crystalline
Color:	White
Odor:	Odorless
Change in condition	
Melting point/Melting range:	73.5°C (164°F)
Boiling point/Boiling range:	150°C (302°F) ((dec))
Sublimation temperature / start:	Not determined
Flash point:	Not applicable
Flammability (solid, gaseous)	Contact with combustibile material may cause fire.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure:	Not determined
Density:	Not determined
Solubility in / Miscibility with	
Water at 25°C (77°F):	735 g/l

10 Stability and reactivity**Thermal decomposition / conditions to be avoided:**

Decomposition will not occur if used and stored according to specifications.

Materials to be avoided:

Reducing agents, easily oxidized materials

Acids

Metal powders

Dangerous reactions

Reacts with reducing agents

Reacts with flammable substances

Dangerous products of decomposition:

Nitrogen oxides

Aluminium oxide fume

11 Toxicological information**Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	3980 mg/kg (mus)
		3671 mg/kg (rat)

Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

(Contd. on page 5)

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 03/26/2007

Reviewed on 01/23/2007

Product name: Aluminum nitrate

(Contd. of page 4)

Subacute to chronic toxicity:

Small doses of nitrates may cause weakness, general depression, headache and mental impairment. Larger doses may cause dizziness, abdominal cramps, vomiting, bloody diarrhea, convulsions and collapse.

Aluminum may be implicated in Alzheimers disease. Inhalation of aluminum containing dusts may cause pulmonary disease.

Additional toxicological information:

May cause harm to the unborn child.

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:**General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations**Product:****Recommendation**

Consult state, local or national regulations to ensure proper disposal.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 Transport information**DOT regulations:**

Hazard class:	5.1
Identification number:	UN1438
Packing group:	III
Proper shipping name (technical name):	ALUMINIUM NITRATE
Label	5.1

Land transport ADR/RID (cross-border)

ADR/RID class:	5.1 (02) Oxidizing substances
Danger code (Kemler):	50
UN-Number:	1438
Packaging group:	III

(Contd. on page 6)

Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 03/26/2007

Reviewed on 01/23/2007

Product name: Aluminum nitrate

(Contd. of page 5)

Description of goods: 1438 ALUMINIUM NITRATE

Maritime transport IMDG:



IMDG Class: 5.1
UN Number: 1438
Label: 5.1
Packaging group: III
Proper shipping name: ALUMINIUM NITRATE

Air transport ICAO-TI and IATA-DGR:



ICAO/IATA Class: 5.1
UN/ID Number: 1438
Label: 5.1
Packaging group: III
Proper shipping name: ALUMINIUM NITRATE

15 Regulations

Product related hazard informations:

Hazard symbols:

Xn Harmful
 O Oxidizing

Risk phrases:

8 Contact with combustible material may cause fire.
 36/38 Irritating to eyes and skin.
 63 Possible risk of harm to the unborn child

Safety phrases:

17 Keep away from combustible material.
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 36/37 Wear suitable protective clothing and gloves.

National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

Information about limitation of use:

For use only by technically qualified individuals.

- USA -

(Contd. on page 7)

Material Safety Data Sheet
acc. to OSHA and ANSI

Printing date 03/26/2007

Reviewed on 01/23/2007

Product name: Aluminum nitrate

(Contd. of page 6)

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing MSDS: Health, Safety and Environmental Department.

Contact: Darrell R. Sanders

USA